Q&A for Elevated Manganese in HW-8a (2nd round)

Q: Why is EPA taking additional samples at this home, and not others?
A: EPA's re-sampling found an elevated level of manganese in untreated well water at this home. This home already has a water treatment system that is designed to treat water with elevated levels of substances, including manganese. EPA needs to connect the well to the treatment system to determine whether it is reducing manganese concentrations to acceptable levels.

Q: Are you going to continue to provide water to this residence?
A: We will continue to provide water to this resident until we have received and evaluated results from the re-sampling.

Q: What was the manganese level in the home and how does this compare with the level for manganese in the first sample that was taken?
A: The manganese level at the one home was 942 ug/l during the second round of sampling and 64 ug/l during the first round of sampling.

Q: What could have caused the levels of manganese to increase from one sample to the next? Could drilling or hydro-fracking activities cause the increase in manganese?
A: EPA did not identify a cause for the variability. EPA's primary goal for our sampling was to determine whether residents had drinking water that posed a health concern.

Q: Why are the elevated levels of concern?
A: Although manganese is an essential nutrient at low doses, chronic exposure to high doses may be harmful. Applying EPA's Drinking Water Advisory for manganese suggests that an intake of manganese from drinking water of 1680 ug/day would not result in any adverse health effects over a lifetime of exposure. Manganese was detected at a concentration of 942 ug/l from the May 2012 re-sampling of this well. Assuming a person consumes 2 liters of water per day with this level of manganese, the manganese intake would be 1884 ug/day (2 x 942), exceeding EPA's health advisory.

Q: Does EPA have standards for manganese?
A: EPA has a voluntary Secondary Maximum Contaminant Level (SMCL) of 50 ug/l to protect against aesthetic effects, such as staining, taste, odor, and appearance of water. There is also a Drinking Water Advisory for manganese which suggests that an intake of manganese from drinking water of 1680 ug/day would not result in any adverse health effects over a lifetime of exposure.

Q: Has EPA ever taken such an action under CERCLA for these types of manganese levels in the past?
A: Yes, part of the original justification for initiating a removal action at Dimock was elevated concentration of manganese.

Q: Can you help ensure the existing treatment system will work?
A: EPA sees the operation and maintenance of existing treatment system owned by the residents to be the responsibility of the residents. Taking tap samples will help us inform the residents whether their treatment system is in fact reducing manganese to acceptable concentrations

Q: What will EPA do if elevated levels of manganese are found at the tap?
A: EPA will determine any additional actions after a thorough review of the results of the re-sampling.

Q: Does EPA have authority to take action over elevated levels of manganese in a residential well?
A: Yes. Manganese is a hazardous substance under CERCLA, which gives EPA authority to respond to the release or threat of release of a hazardous substance.

Q: Is this within the scope of EPA's initial investigation into water quality in Dimock?
A: Yes. This action is within the scope of the investigation as described in the action memo.